Rail Enhancement Fund
Project Descriptions

as approved by
the Commonwealth Transportation Board
12-15-05

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06-001 Heartland Corridor- Virginia Components

- Description: Virginia components consist of clearing tunnels to accommodate double stack intermodal trains and constructing an intermodal facility in Roanoke to transfer containers between rail and trucks.
- REF project cost: $31,936,673 (Total project cost: $186M, 38.4M in Virginia)
- Recommended REF: $22,350,000
- Public benefit ratio: 29.8 to 1
- Key factors:
  - Railcar loads per year: 37,500 (150,000 containers)
  - Truck VMT reduced over 20 yrs: 690,540,000
  - Gallons of fuel saved over 20 yrs: 128,928,000
- Assumptions:
  - Truck mileage alternatives calculated using three routes, I-95, I-64, and I-81
- Contractual conditions:
  - West Virginia improvements must be under contract for concurrent completion schedules with Virginia improvements

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06-002 Commonwealth Railway Line Purchase

- Description: Purchase 10.5 miles of existing rail line from Norfolk Southern Railway between Chesapeake and Suffolk to ensure dual, unimpeded and equitable access.

- REF project cost: $6,660,000
- Recommended REF: $4,160,000
- Public benefit ratio: 7.0 to 1
- Key factors:
  - Railcar loads per year: 7,867
  - Truck VMT reduced over 20 yrs: 30,812,160
  - Gallons of fuel saved over 20 yrs: 5,747,827

- Assumptions:
  - Only credited CSX carloads as split with 2 other CSX projects:
    - Suffolk Connection and Portsmouth Subdivision Clearances
  - Reduced line purchase by 2 miles

- Contractual conditions:
  - Virginia's interest in the line purchase must be preserved through a recorded instrument to protect long term, equitable dual access (50+ years)

06-008 APM/Maersk Terminals Rail Yard Expansion

APM Terminals Virginia is constructing a state of the art marine container facility in Portsmouth.

- Description: This project would allow the APM/Maersk facility to go to 6 tracks at the rail yard, doubling their capacity. This project would provide the Hampton Roads region with an alternative to truck-induced congestion while allowing growth at the Port of Hampton Roads.
- REF project cost: $18,600,000
- Recommended REF: $9,300,000
- Public benefit ratio: 3.5 to 1
- Key factors:
  - Railcar loads per year: 128,250
  - Truck VMT reduced over 20 yrs: 29,506,050
  - Gallons of fuel saved over 20 yrs: 5,673,592
- Assumptions:
  - On dock rail mileage credit only – 2.6 miles
  - Truck drayage to Portsmouth Marine Terminal and NIT mileage averaged 1/3 to CSX and 2/3 to NS

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06-009 Suffolk Connection from CSX to Commonwealth Railway

- Description:. Construct a connection track from the CSXT Portsmouth Subdivision to the Commonwealth Railway in Suffolk to ensure dual, unimpeded and equitable access.

- REF project cost: $5,940,000
- Recommended REF: $4,158,000
- Public benefit ratio: 6.2 to 1
- Key factors:
  - Railcar loads per year: 7,867
  - Truck VMT reduced over 20 yrs: 26,632,745
  - Gallons of fuel saved over 20 yrs: 4,983,234

- Assumptions:
  - Only credited CSX carloads as split with two other CSX projects:
    - Commonwealth Railway Purchase and Portsmouth Subdivision Clearances

- Contractual conditions:
  - CSX commitments on the Richmond/Washington, DC Corridor projects must be met

06-010 Portsmouth Subdivision Height Clearances

- **Description:** Clear overhead impediments on the VA portion of the Portsmouth Subdivision (rail line that runs between Portsmouth and Weldon, NC) to provide double stack freight service over a 560-mile market, connecting Portsmouth with Atlanta and the Southeast. These improvements would allow double stack movement to the VA/NC state line. CSXT will fund improvements between the VA/NC line and Atlanta.

- **REF project cost:** $2,238,000
- **Recommended REF:** $1,556,600
- **Public benefit ratio:** 16.3 to 1
- **Key factors:**
  - **Railcar loads per year:** 7,867
  - **Truck VMT reduced over 20 yrs:** 27,413,760
  - **Gallons of fuel saved over 20 yrs:** 5,137,248

- **Assumptions:**
  - Only credited CSX carloads as split with two other CSX projects:
    - Commonwealth Railway Purchase and Suffolk Connection

- **Contractual conditions:**
  - CSX commitments on the Richmond/Washington, DC Corridor projects must be met
  - NC improvements must be under contract for concurrent completion schedules with VA improvements

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06-012 North Acca Yard Switches

- Description: Replace 13 pneumatic switches at North Acca Yard (City of Richmond) with more reliable electric dual control (remote or manual operation) switches. Dual control allows either passenger or freight trains to manually operate the switch without the presence of a Signal Maintainer. Associated signals and communication systems would also be upgraded. Project would include installation of switch heaters.

- REF project cost: $3,993,000
- Recommended REF: $2,795,100
- Public benefit ratio: 15.1 to 1
- Key factors:
  - Railcar loads per year: 21,500
  - Truck VMT reduced over 20 yrs: 48,375,000
  - Gallons of fuel saved over 20 yrs: 7,863,840
  - Passenger travel time savings (hours): 14,400

- Assumptions:
  - One minute of travel time savings per passenger trip

- Contractual conditions:
  - CSX commitments on the Richmond/Washington, DC Corridor projects must be met

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06-015 a Richmond Port Passenger/Freight Improvements

- Description: The project related to this study would:
  - Provide dual, unimpeded and equitable access to the Port of Richmond
  - Provide a TDX connection to Main St. Station
  - Add four additional passenger stops at Main St. Station per day
  - Provide turning and storage facilities for passenger trains
- REF project cost: $200,000 (total project cost: approximately $6M)
- Recommended REF: $140,000
- Public benefit ratio: 10.2 to 1
- Key factors:
  - Passengers per year: 29,200
  - Railcar loads per year: 3,500
  - Car VMT reduced over 20 yrs: 52,560,000
  - Truck VMT reduced over 20 yrs: 40,950,000
  - Gallons of fuel saved over 20 yrs: 7,912,800
- Assumptions:
  - Feasibility study
  - Cost/Benefit information based on total project
- Contractual conditions:
  - Standard contract provisions for studies
  - Match provision under review by the Office of the Attorney General

06-020. Charlottesville Connecting Track Upgrade

- Description: Upgrade connecting track in Charlottesville between Norfolk Southern and Buckingham Branch. Upgrade includes installation of approximately 225 ties, surfacing 1,500 feet of track and replacement of two epoxy joints. Would allow Amtrak to enter and exit the Buckingham Branch line at Charlottesville instead of Orange.

- REF project cost: $30,000
- Recommended REF: $21,000
- Public benefit ratio: 10.4 to 1
- Key factors:
  - Passenger travel time savings annually: 5,000 hours

- Assumptions:
  - 10 minutes per passenger travel time savings
  - Cost/benefit ratio calculated for 5 years of operation

06-022. VRE Gainesville-Haymarket Extension Feasibility Study

- Description: Would study the feasibility of extending VRE commuter rail service between the City of Manassas and Haymarket (Prince William Co.). Would narrow down costs, provide construction phasing, update ridership forecasts, identify potential environmental and ROW issues, and determine the potential impact of the extension on the existing VRE system.

- REF project cost: $1,000,000 (total project cost: $200M)
- Recommended REF: $700,000
- Public benefit ratio: 10.5 to 1
- Key factors:
  - Passengers per year: 775,000
  - Railcar loads per year: 302,000
  - Car VMT reduced over 20 yrs: 372,000,000
  - Truck VMT reduced over 20 yrs: 344,280,000
  - Gallons of fuel saved over 20 yrs: 79,017,600
  - Passenger travel time savings (hours): 129,167

- Assumptions:
  - Feasibility study only
  - Cost/benefit based on total project, assuming $200 million with 50% federal and/or private funding

- Contractual conditions:
  - Standard contract provisions for studies

06-023 a. VRE Cherry Hill Station and Third Track

- Description: Would improve rail service between Powell's Creek and Arkendale (Prince William Co.) on the Fredericksburg VRE line. The four-year project is part of a larger multi-phased corridor improvement project and would include:
  - construction of a third track in the CSX right-of-way
  - design and construction of a new VRE station and slope stabilization at Cherry Hill
  - a public commuter parking structure to serve the station
  - a new highway grade separation (bridge) over CSX
- **REF project cost:** $3,571,429 (total project cost: approx. $72M)
- **Recommended REF:** $2,500,000
- **Public benefit ratio:** 4.2 to 1
- **Key factors:**
  - **Passengers per year:** 275,000
  - **Car VMT reduced over 20 yrs:** 200,000,000
  - **Gallons of fuel saved over 20 yrs:** 10,000,000
  - **Passenger travel time savings (hours):** 74,013
- **Assumptions:**
  - Feasibility study only
  - Cost/benefit based on total project
- **Contractual conditions:**
  - Standard contract provisions for studies

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06-025. Intermodal Improvements- Crewe to Suffolk

- Description: This project would:
  - improve the connection with Commonwealth Railway in Suffolk for daily train load movements of up to 120,000 containers annually in 2010
  - establish a block swap yard in Crewe (Nottoway Co.)
  - Add two tracks at the auto loading/unloading facility in Poe (Petersburg)
  - Add one additional track and carload switching facility in Broadway Yard in Petersburg
- **REF project cost:** $7,470,000
- **Recommended REF:** $4,229,000
- **Public benefit ratio:** 13.4 to 1
- **Key factors:**
  - **Railcar loads per year:** 17,500
  - **Truck VMT reduced over 20 yrs:** 63,665,000
  - **Gallons of fuel saved over 20 yrs:** 11,435,900
- **Assumptions:**
  - Rail Enhancement Funding reduced by $1.0 million by applicant

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DRPT-1. VA/NC Passenger Rail EIS

- Description: This project would:
  - Complete the Tier II Environmental Impact Statement (EIS) for the segment of the Southeast High Speed Rail Corridor (SESHR) between Main St. Station and Raleigh, NC.
  - Address issues related to the potential connection of Hampton Roads to the SESHR Corridor
  - Narrow down costs, provide construction phasing, update ridership forecasts, and identify potential environmental and right-of-way issues

- **REF project cost:** $2,785,000 (total project cost: $1.8B, $334M for Richmond to NC state line portion)
- **Recommended REF:** $1,500,000
- **Public benefit ratio:** 8.9 to 1
- **Key factors:**
  - **Passengers per year:** 1,946,880
  - **Car VMT reduced over 20 yrs:** 2,147,851,113
  - **Gallons of fuel saved over 20 yrs:** 88,317,656
  - **Passenger travel time savings (hours):** 1,460,160

- **Assumptions:**
  - EIS only
  - Cost/benefit based on total project components in Virginia, assuming $334M with 50% federal and/or private funding

- **Contractual conditions:**
  - Standard contract provisions for studies
  - Match provision under review by the Office of the Attorney General

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